



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,296	10/15/2001	Teruaki Santoki	1417-366	1069

23117 7590 01/05/2004

NIXON & VANDERHYE, PC  
1100 N GLEBE ROAD  
8TH FLOOR  
ARLINGTON, VA 22201-4714

EXAMINER
----------

RICKMAN, HOLLY C

ART UNIT	PAPER NUMBER
----------	--------------

1773

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/976,296

Applicant(s)

SANTOKI ET AL.

Examiner

Holly Rickman

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 is/are allowed.
- 6) ☒ Claim(s) 10,12-14 and 16 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. The objections to claims 3 and 8 are rendered moot in view of the cancellation of the claims.

### ***Specification***

2. The substitute specification filed 10-1-03 has not been entered because it does not conform to 37 CFR 1.125(b) and (c). The substitute specification should not include claims and a marked up version of the substitute specification showing all the changes (including the matter being added to and the matter being deleted from) to the specification of record was not received.

### ***Claim Rejections - 35 USC § 112***

3. The rejections of claims 1-5 and 8-9 under 35 U.S.C. 112, second paragraph, are moot in view of the cancellation of the claims.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1773

5. The rejection of claims 1, 3-5, and 9 under 35 U.S.C. 103(a) as being unpatentable over Tamari et al. (EP 0673021) in view of Usuki (US 6525908) is withdrawn in view of the cancellation of claims 1-9.

6. Claims 10, 12-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamari et al. (EP 0673021) in view of Usuki (US 6525908).

Tamari et al. disclose a magnetic recording medium containing a Co-containing spinel iron oxide (i.e., maghemite) disposed on top of a substrate and having a layer of NiO in between (see abstract). In one example, the coercive force of a medium with a Co containing spinel iron oxide film having a thickness of 40.8 nm is 2000 Oe.

The reference is silent with respect to the particular values of Ra and Rmax of the magnetic surface.

Usuki discloses a magnetic recording medium having a defined values of Ra and Rmax such that high electromagnetic transfer characteristics are ensured (col. 7, lines 38-41).

It would have been obvious to one of ordinary skill in the art at the time of invention to optimize the roughness parameters noted above for the magnetic layer taught by Tamari et al. in order to provide a medium having high electromagnetic transfer characteristics.

***Allowable Subject Matter***

7. Claims 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 11 and 15 are allowable over the closest prior art to Tamari et al. and Usuki. The prior art fails to teach or suggest the claimed surface electrical resistance value and saturation magnetization value of the recording medium taught therein. The prior art fails to teach or suggest a motivation to optimize these parameters in the structure taught by the combination of Tamari et al. in view of Usuki.

***Response to Arguments***

9. Applicant's arguments filed 10/1/03 have been fully considered but they are not persuasive.

Applicant argues that Tamari et al. and Usuki are not "reasonably pertinent to the problem solved by applicants." However, it is the Examiner's contention that both references are from the same field of endeavor, that is, magnetic recording media. As such, both fall in the category of analogous art according to the criteria set forth in *In re Clay*. According to *In re Clay*, it is only if the prior art reference is not within the same field of endeavor as the inventor's that one must consider the particular problem which the prior art addressed.

Applicant further argues that Tamari et al. do not meet the claim limitation directed to the thickness of the "Co-containing spinel-based iron oxide thin film." Applicant argues that Tamari et al. teach a multilayered structure in which a single unit having a thickness of 408Å was laminated to form a structure having a thickness of 244.8 nm which is outside of the claimed thickness range. However, the reference meets all limitations of the claims for a single unit of

Art Unit: 1773

the multilayered structure and the present claims do not in any way exclude the presence of additional unrecited layers.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (703) 305-2642. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J. Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1773

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read "Holly Rickman". The signature is fluid and cursive, with the first name "Holly" being more prominent than the last name "Rickman".

Holly Rickman  
Primary Examiner  
Art Unit 1773

hcr  
December 29, 2003